

Product Data Sheet

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Sika-Trocal S-Vap 5000E SA

Sika-Trocal® S-Vap 5000E SA

Vapour Control Layer

Product Description

S-Vap 5000E SA is a multi-layer self-adhesive vapour control layer made of polymer modified bitumen with a glass-fibre mat reinforcement and an aluminium foil as top layer.

Uses

Vapour control layer (VCL) is applied over most common substrates such as concrete, metal decks, plywood, timber boards and/or oriented strand board (OSB) deck.

Special application within adhered systems:

- Adhered system: Self-adhesion strength limits max wind up lift design load
 - Combined adhered system: Self adhesion strength is part of wind-up lift design
- Temporary waterproofing layer: S-Vap 5000E SA can also be used as temporary waterproofing layer, as top layer can be left exposed for up to 4 weeks.

Important: If used in an adhered roof build-up, additional installation requirements must be applied e.g. use of Primer 600 to achieve full self adhesion strength:

- Self adhesion strength on metal decks in combination with Primer 600, max. design load of 2.4 kN/m²
 - Self-adhered on concrete deck in combination with Primer 600, max. design load 2.4 kN/m².
 - Self-adhered on plywood/OSB deck in combination with Primer 600, max. design load 2.4 kN/m².
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Characteristics / Advantages

- Ease and speed of installation, due to self-adhesive property of back layer and its specific weight.
 - Can be used in a totally adhered roof build-up. No additional fasteners required for securing the thermal insulation boards to the structural deck.
 - Can be used as temporary waterproof layer for up to 4 weeks, as a top layer without the need for additional weight/ballast and/or mechanical fastening.
 - Due to its high adhesion strength the VCL can withstand high wind loads; design load of 2.4 kN/m².
 - High adhesion/bonding strength leading to an air tight roof construction.
 - High tearing resistance under foot traffic makes it ideal for use on profiled metal decks.
 - High water vapour resistance makes it suitable in combination with all membranes.
 - Wide application range, in regard to use in different system applications and/or in combination with different structural deck types, substrates.
 - Improved fire resistance achieved by added flame-retardant.
 - Can be bonded on roof slopes and up vertical abutments.
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Tests

Approvals / Standards	■ CE marking according EN 13970
	■ Reaction to fire according to EN 13 501-1
	■ Fire behaviour according BS 476-6,7
	■ Quality management system EN ISO 9001/14001

Product Data

Form

Appearance	Surface:	Aluminium foil.
Colour	Top surface:	Aluminium matt. Additionally a line to mark overlap area (7.5 cm), on one roll side.
	Bottom surface:	White/black with release liner (PE-LD foil)
Packaging	Packing unit:	see price list
	Roll length:	30.00 m and 10.00 m
	Roll width:	1.38m
	Roll weight:	28.98kg

Storage

Storage Conditions	Store rolls in vertical position and protected against sunlight, rainfall, snow and heat. During cold weather the rolls shall be protected against frost. Do not stack pallets of rolls during transport or storage.
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Shelf-Life	The product must be installed within 12 months of production date.
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Technical Data

Product Declaration	EN 13970
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Chemical Basis	Polymer modified bitumen (self adhesive) with a glass fleece carrier, a composite aluminium foil as top layer and a PE-LD release liner.	
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Length	30.00 m (+ 2 %)	EN 1848-210
Width	10.00m (+2%)	
	1.38m (± 1%)	

Thickness	0.60 mm (±10 %)	EN 1849-2
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Mass per unit area	700 g/m ² (±10 %)	EN 1849-2
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Straightness	Pass	EN 1848-1
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Visible defects	Pass	EN 1850-1
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Reaction to fire, freely suspended	Class E	EN ISO 11952-2: 2002, classification to EN 13501-1
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Water vapour permeability	> 1800 m	EN 1931
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Water tightness	Pass	EN 1928
Tensile strength	≥ 440 N	EN 29073-3
Elongation at break	≥ 2 %	EN 29073-3
Resistance to impact	Ø 10 mm	EN 12 691
Cold bending test	-20 °C	EN 495-5
Tear resistance (nail shank)	≥ 100 N	EN 12 310-1
Joint peel strength	≥ 50 N/50 mm	EN 12 316-2
Joint shear strength	≥ 5 N/50 mm	EN 12 317-2
Durability against alkaline	Pass	EN 1847
Durability against aging	Pass	EN1296/EN1931

System Information

System Structure	Ancillary, complementary products according to local price list: <ul style="list-style-type: none"> - Primer 600 - Sika-Trocal® L 100
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Application Details

Consumption	~ 1.38 m ² / square metre surface
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Substrate Quality	S-Vap 5000E SA is released on all major structural decks; concrete decks, corrugated/profiled metal deck, and plywood/OSB decks. Any other substrate type requires approval by Sika Limited. Substrates must be in plane, even and clean; further free of dust, oil and grease. S-Vap 5000E SA may only be used in combination with Primer 600.
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Concrete deck:

In plane concrete deck and or/levelled screed. Substrate shall fulfil general requirements and shall not contain any pointy and/or coarse-grained surface areas. Primer 600 must be used, approx. 200g/m² – 500 g/m² depending on surface smoothness and porosity, if used in an adhered system.

Plywood/OSB deck:

Substrate shall be clean and dry. Primer 600 must be used, approx. 200g/m² – 500 g/m² depending on surface smoothness and porosity, if used in an adhered system.

Corrugated metal deck:

Corrugated metal deck shall be clean, dry and free of oil, dust and de-greased.

There must be a minimum bonding area of ≥ 49%. Primer 600 must be used, approx. 200g/m² – 500 g/m² depending on surface smoothness and porosity, if used in an adhered system. De-grease using Sika-Trocal® L100 Cleaner.

Vertical areas / upstands and flashing

Flashings and terminations form the edges of the vapour control function and airtight layer; thus these must be executed with care (until top edge of the insulation boards).

Substrate Preparation As instructions above for specific substrates.

**Application
Conditions / Limits**

**Notes on Application/
Limits**

**Installation
Instructions**

Application Guideline Depending on system used (mechanically fastend/ballasted/adhered) refer to relevant system information.

Application Method Fixing Method – Adhered Systems:
S-Vap 5000E SA is adhered to the substrate. Primer 600 must be applied as substrate treatment, to achieve the required adhesion strength. An approved thermal insulation board must be selected. In an adhered system, the specified thermal insulation board is being adhered to the S-Vap 5000E SA, using a Proprietary Adhesive obtained from a suitable manufacturer. Finally, the Sika-Trocal SGK membrane is adhered to the surface of the insulation board, using Sika-Trocal C300.

Installation Procedure

Before adhering the S-Vap 5000E SA, the substrate must be checked (clean without any surface contaminations, free of foreign objects and or surface toppings, oil and grease free, and dry and primed with Primer 600. On profiled metal decks, the sheets must be laid in the direction of the deck, where the side/longitudinal seams are fully supported, positioned on the top flange of the profiled metal deck. At the end of the roll, an additional 20 cm wide S-Vap 5000E SA strip has to be adhered firmly on the already laid VCL sheets, positioned on centre and running perpendicular to the deck direction (laid rolls). This provides a firm backer to which the ends of the sheets can be adhered to. S-Vap 5000E SA seams (side and end laps) are formed with an overlap of 7.5 cm by self-adhesion, no additional primer needed. To achieve tightly sealed seams the laps must be rolled down firmly with a pressure roller (silicone roller) or by applying pressure. If seams are not immediately closed after unrolling the S-Vap 5000E SA, all seams need to be properly cleaned with cleaner Sika-Trocal® L 100. Allow the cleaner to evaporate completely. Roll out first S-Vap 5000E SA in the direction of the metal profile. Following rolls must be rolled out and aligned with the line marking which marks the overlap area at 7.5 cm. Adhere the first part of the self-adhesive vapour barrier and peel away the release liner sideways.

At T-joints the edge of the middle, covered sheet is to be bevelled at 45°. Using a silicone roller, all laps including the steps at bevels are to be firmly pressed together after being adhered into position. All flashings, upstands and penetrating elements e.g. vent pipe must be closed airtight, whereby the S-Vap 5000E SA must always be attached on the warm side of the insulation.

The full area of S-Vap 5000E SA must be pressed into place immediately after adhering, using pressure roller or similar.

OSB and Plywood boards of more than 500mm width should not be primed at the joints. Leaving a strip of max. 100 mm width free of primer each side of the joint, to facilitate minor movement of the boards. Where the width of the OSB or Plywood boards is less than 500mm, the boards are primed with Primer 600 over the entire area.

If the S-Vap 5000E SA layer is to serve as temporary waterproofing during construction (4 weeks), a slope of at least 1.25% (1:80) must be provided to ensure drainage with no standing water.

Tool Cleaning

Tools and equipment must be cleaned with cleaner immediately after use.

**Notes on Installation/
Limits**

Installation works shall be performed only by Sika-Trocal Licensed Contractors.

Temperature limits for the installation of the S-Vap 5000E SA:

Substrate temperature: at least +5 °C min.
Ambient temperature: at least +5 °C min.

Note:

The limiting factor in the wind up-lift resistance of the adhered roofing assembly will be the adhesion strength of the S-Vap 5000E SA to the substrate. See information under "Uses".

S-Vap 5000E SA is not suitable as permanent waterproofing. It is not designed as roofing membrane and therefore can not replace the waterproofing membrane.

Value Base	All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.
Local Restrictions	Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.
Ecology, Health and Safety Information	A Safety Data Sheet following EC-Regulation 1907/2006, Article 31 is not needed to bring the product to the market, to transport or to use it. The product does not damage the environment when used as specified.
REACH	<p>European Community Regulation on chemicals and their safe use (REACH: EC 1907/2006)</p> <p>This product is an article within the meaning of Regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. Therefore, there are no registration requirements for substances in articles within the meaning of Article 7.1 of the Regulation.</p> <p>Based on our current knowledge, this product does not contain SVHC (substances of very high concern) from the candidate list published by the European Chemicals Agency in concentrations above 0.1 % (w/w).</p>
Protective Measures	Fresh air ventilation must be ensured, when working (welding) in closed rooms. Local safety regulations must be observed.
Transportation Class	The product is not classified as hazardous good for transport.
Disposal	Disposal must be according to local regulations. Please contact your local Sika sales organisation for more information.
Legal Notes	The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.



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